

2N5954 2N5955 2N5956 PNP  
2N6372 2N6373 2N6374 NPN

**COMPLEMENTARY SILICON  
POWER TRANSISTORS**



**TO-66 CASE**



[www.centralemi.com](http://www.centralemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N5954 and 2N6372 series devices are complementary silicon power transistors manufactured by the epitaxial base process, mounted in a hermetically sealed metal case designed for general purpose amplifier and switching applications.

**MARKING: FULL PART NUMBER**

**MAXIMUM RATINGS:** ( $T_C=25^\circ\text{C}$ )

Collector-Base Voltage  
Collector-Emitter Voltage  
Collector-Emitter Voltage  
Collector-Emitter Voltage  
Emitter-Base Voltage  
Continuous Collector Current  
Continuous Base Current  
Power Dissipation  
Operating and Storage Junction Temperature  
Thermal Resistance

| SYMBOL         | 2N5954 | 2N5955      | 2N5956 | UNITS              |
|----------------|--------|-------------|--------|--------------------|
|                | 2N6372 | 2N6373      | 2N6374 |                    |
| $V_{CBO}$      | 90     | 70          | 50     | V                  |
| $V_{CEV}$      | 90     | 70          | 50     | V                  |
| $V_{CER}$      | 85     | 65          | 45     | V                  |
| $V_{CEO}$      | 80     | 60          | 40     | V                  |
| $V_{EBO}$      |        | 5.0         |        | V                  |
| $I_C$          |        | 6.0         |        | A                  |
| $I_B$          |        | 2.0         |        | A                  |
| $P_D$          |        | 40          |        | W                  |
| $T_J, T_{stg}$ |        | -65 to +200 |        | $^\circ\text{C}$   |
| $\theta_{JC}$  |        | 4.3         |        | $^\circ\text{C/W}$ |

**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

| SYMBOL     | TEST CONDITIONS                                                                  | 2N5954 |        | 2N5955 |        | 2N5956 |        | UNITS         |
|------------|----------------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|---------------|
|            |                                                                                  | 2N6372 | 2N6373 | 2N6373 | 2N6374 | 2N6374 | 2N6374 |               |
|            |                                                                                  | MIN    | MAX    | MIN    | MAX    | MIN    | MAX    |               |
| $I_{CEV}$  | $V_{CE}=85\text{V}, V_{BE}=1.5\text{V}, R_{BE}=100\Omega$                        | -      | 100    | -      | -      | -      | -      | $\mu\text{A}$ |
| $I_{CEV}$  | $V_{CE}=65\text{V}, V_{BE}=1.5\text{V}, R_{BE}=100\Omega$                        | -      | -      | -      | 100    | -      | -      | $\mu\text{A}$ |
| $I_{CEV}$  | $V_{CE}=45\text{V}, V_{BE}=1.5\text{V}, R_{BE}=100\Omega$                        | -      | -      | -      | -      | -      | 100    | $\mu\text{A}$ |
| $I_{CEV}$  | $V_{CE}=85\text{V}, V_{BE}=1.5\text{V}, R_{BE}=100\Omega, T_C=150^\circ\text{C}$ | -      | 2.0    | -      | -      | -      | -      | mA            |
| $I_{CEV}$  | $V_{CE}=65\text{V}, V_{BE}=1.5\text{V}, R_{BE}=100\Omega, T_C=150^\circ\text{C}$ | -      | -      | -      | 2.0    | -      | -      | mA            |
| $I_{CEV}$  | $V_{CE}=45\text{V}, V_{BE}=1.5\text{V}, R_{BE}=100\Omega, T_C=150^\circ\text{C}$ | -      | -      | -      | -      | -      | 2.0    | mA            |
| $I_{CER}$  | $V_{CE}=75\text{V}$                                                              | -      | 100    | -      | -      | -      | -      | $\mu\text{A}$ |
| $I_{CER}$  | $V_{CE}=55\text{V}$                                                              | -      | -      | -      | 100    | -      | -      | $\mu\text{A}$ |
| $I_{CER}$  | $V_{CE}=35\text{V}$                                                              | -      | -      | -      | -      | -      | 100    | $\mu\text{A}$ |
| $I_{CEO}$  | $V_{CE}=65\text{V}$                                                              | -      | 1.0    | -      | -      | -      | -      | mA            |
| $I_{CEO}$  | $V_{CE}=45\text{V}$                                                              | -      | -      | -      | 1.0    | -      | -      | mA            |
| $I_{CEO}$  | $V_{CE}=25\text{V}$                                                              | -      | -      | -      | -      | -      | 1.0    | mA            |
| $I_{EBO}$  | $V_{BE}=5.0\text{V}$                                                             | -      | 0.1    | -      | 0.1    | -      | 0.1    | mA            |
| $BV_{CEV}$ | $I_C=100\text{mA}, V_{BE}=1.5\text{V}, R_{BE}=100\Omega$                         | 90     | -      | 70     | -      | 50     | -      | V             |
| $BV_{CER}$ | $I_C=100\text{mA}, R_{BE}=100\Omega$                                             | 85     | -      | 65     | -      | 45     | -      | V             |
| $BV_{CEO}$ | $I_C=100\text{mA}$                                                               | 80     | -      | 60     | -      | 40     | -      | V             |

R2 (2-September 2014)

2N5954 2N5955 2N5956 PNP  
2N6372 2N6373 2N6374 NPN

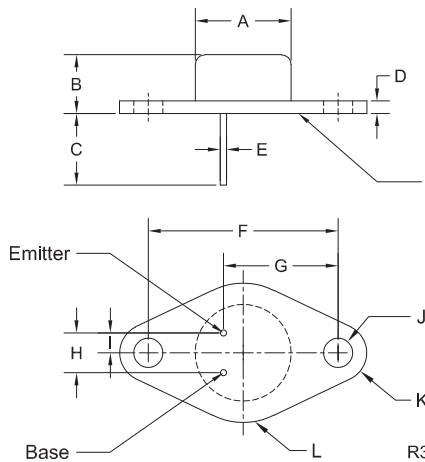
**COMPLEMENTARY SILICON  
POWER TRANSISTORS**



**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_C=25^{\circ}\text{C}$  unless otherwise noted)

| SYMBOL        | TEST CONDITIONS                                                          | 2N5954<br>2N6372 |     | 2N5955<br>2N6373 |     | 2N5956<br>2N6374 |     | UNITS |
|---------------|--------------------------------------------------------------------------|------------------|-----|------------------|-----|------------------|-----|-------|
|               |                                                                          | MIN              | MAX | MIN              | MAX | MIN              | MAX |       |
| $V_{CE(SAT)}$ | $I_C=2.0\text{A}$ , $I_B=200\text{mA}$                                   | -                | 1.0 | -                | -   | -                | -   | V     |
| $V_{CE(SAT)}$ | $I_C=2.5\text{A}$ , $I_B=250\text{mA}$                                   | -                | -   | -                | 1.0 | -                | -   | V     |
| $V_{CE(SAT)}$ | $I_C=3.0\text{A}$ , $I_B=300\text{mA}$                                   | -                | -   | -                | -   | -                | 1.0 | V     |
| $V_{CE(SAT)}$ | $I_C=6.0\text{A}$ , $I_B=1.2\text{A}$ (PNP types)                        | -                | 2.0 | -                | 2.0 | -                | 2.0 | V     |
| $V_{BE(ON)}$  | $V_{CE}=4.0\text{V}$ , $I_C=2.0\text{A}$                                 | -                | 2.0 | -                | -   | -                | -   | V     |
| $V_{BE(ON)}$  | $V_{CE}=4.0\text{V}$ , $I_C=2.5\text{A}$                                 | -                | -   | -                | 2.0 | -                | -   | V     |
| $V_{BE(ON)}$  | $V_{CE}=4.0\text{V}$ , $I_C=3.0\text{A}$                                 | -                | -   | -                | -   | -                | 2.0 | V     |
| $V_{BE(ON)}$  | $V_{CE}=4.0\text{V}$ , $I_C=6.0\text{A}$ (NPN types)                     | -                | 3.0 | -                | 3.0 | -                | 3.0 | V     |
| $h_{FE}$      | $V_{CE}=4.0\text{V}$ , $I_C=2.0\text{A}$                                 | 20               | 100 | -                | -   | -                | -   |       |
| $h_{FE}$      | $V_{CE}=4.0\text{V}$ , $I_C=2.5\text{A}$                                 | -                | -   | 20               | 100 | -                | -   |       |
| $h_{FE}$      | $V_{CE}=4.0\text{V}$ , $I_C=3.0\text{A}$                                 | -                | -   | -                | -   | 20               | 100 |       |
| $h_{FE}$      | $V_{CE}=4.0\text{V}$ , $I_C=6.0\text{A}$                                 | 5.0              | -   | 5.0              | -   | 5.0              | -   |       |
| $h_{fe}$      | $V_{CE}=4.0\text{V}$ , $I_C=0.5\text{A}$ , $f=1.0\text{kHz}$             | 25               | -   | 25               | -   | 25               | -   |       |
| $f_T$         | $V_{CE}=4.0\text{V}$ , $I_C=1.0\text{A}$ , $f=1.0\text{MHz}$ (NPN types) | 4.0              | -   | 4.0              | -   | 4.0              | -   | MHz   |
| $f_T$         | $V_{CE}=4.0\text{V}$ , $I_C=1.0\text{A}$ , $f=1.0\text{MHz}$ (PNP types) | 5.0              | -   | 5.0              | -   | 5.0              | -   | MHz   |

**TO-66 CASE - MECHANICAL OUTLINE**



Seating Plane:  
The seating plane must be  
within 0.001" concave to  
0.004" convex within  
0.600" diameter from the  
center of the device.

| SYMBOL  | INCHES |       | MILLIMETERS |       |
|---------|--------|-------|-------------|-------|
|         | MIN    | MAX   | MIN         | MAX   |
| A (DIA) | 0.470  | 0.500 | 11.94       | 12.70 |
| B       | 0.250  | 0.340 | 6.35        | 8.64  |
| C       | 0.360  | -     | 9.14        | -     |
| D       | 0.050  | 0.075 | 1.27        | 1.91  |
| E (DIA) | 0.028  | 0.034 | 0.71        | 0.86  |
| F       | 0.956  | 0.964 | 24.28       | 24.48 |
| G       | 0.570  | 0.590 | 14.48       | 14.99 |
| H       | 0.190  | 0.210 | 4.83        | 5.33  |
| I       | 0.093  | 0.107 | 2.36        | 2.72  |
| J (DIA) | 0.142  | 0.152 | 3.61        | 3.86  |
| K (RAD) | 0.141  |       | 3.58        |       |
| L (RAD) | 0.345  |       | 8.76        |       |

TO-66 (REV:R3)

**MARKING:  
FULL PART NUMBER**

R2 (2-September 2014)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



---

### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

---

### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

---

### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

---

### CONTACT US

#### Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.  
145 Adams Avenue  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
Support Team Fax: (631) 435-3388  
[www.centrasemi.com](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

---

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centrasemi.com/terms](http://www.centrasemi.com/terms)